TERRABRUTE™ INSTALLATION GUIDE

Introduction

TerraBrute™ is a new integral bell restrained joint PVC pipe. It is AWWA C900 pipe with a slight modification that allows the joints to be locked, and the pipe used for "pulled in place" applications like horizontal directional drilling (HDD) or pipe bursting.

TerraBrute's unique locking system (patent pending) allows pipe to be assembled one length at a time, thus minimizing disturbance to the surrounding area and making TerraBrute the ideal choice for HDD projects located in tight areas.

Dimensions

When planning an HDD or pipe bursting project with TerraBrute, it must be remembered that it is a gasketed cast iron outside diameter (CIOD) pipe. This means that it will have a larger outside diameter than an IPSOD HDPE pipe of the same nominal size. In addition, the bell is the largest diameter on the pipe and must be accounted for when planning pre-ream operations.

Nominal Diameter		Pressure Rating (2:1 safety factor)	Maximum Outside Diameter (external ring)		Average Internal Diameter	
mm	(in)	psi	mm	(in)	mm	(in)
100	(4)	305	160	(6.3)	104	(4.1)
150	(6)	305	230	(9.1)	149	(5.9)
200	(8)	235	290	(11.4)	204	(8.0)
250	(10)	235	350	(14.2)	250	(9.8)
300	(12)	235	415	(16.3)	297	(11.7)

Minimum Bending Radius - TerraBrute™ Pipe

Nominal Size		Allowable Pipe Bending Degrees (Angle)	Allowable Joint Deflection Degrees	Total	Joint Deflection Radius (m) *		Min. Allowable Radius (m) **	
mm	(in)				m	(ft)	m	(ft)
100	(4)	5.7	8.5	14.2	20.0	65.6	11.3	37.1
150	(6)	4	8.5	12.5	20.0	65.6	13.1	43.0
200	(8)	3	7.5	10.5	22.8	74.8	15.9	52.2
250	(10)	2.5	5	7.5	34.6	113.5	22.8	74.8
300	(12)	2.1	5	7.1	34.6	113.5	24.1	79.1

* Bending radius with joint deflection only (no bending)

** Joint deflection and pipe bending

Maximum Allowable Pull Forces

Nominal Size		Ultimate Pulling Force		Allowable* Pulling Force	
mm	(in)	(kN)	(lbs)	kN	lbs
100	(4)	100	22400	50	11200
150	(6)	220	49500	110	24700
200	(8)	230	51700	115	25800
250	(10)	375	84300	187.5	42100
300	(12)	550	123600	275	61800

*2:1 Safety Factor